

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.15**SOURCE INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** SIR-000060**Date Inspected:** 16-May-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**Quality Control Contact:** Lu Jian Hua**Quality Control Present:** Yes No**Material transfer:** Yes No N/A**Sampled Items:** Yes No N/A**Stock Transfer:** Yes No N/A**OK to Cut:** Yes No N/A**Rebar Test Witness:** Yes No N/A**Delayed/Cancelled:** Yes No N/A**Other:** NA**Bridge No:** 34-0006**Component:** NA**Bid Item:** 52, 55**Lot No:** NA**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Mike Hasler was present to observe quality control functions related to welding, testing and fabrication procedures at the ZPMC facility on Changxing Island for the San Francisco Oakland Bay Self Anchored Suspension Bridge.

At 0900 hours, Caltrans Quality Assurance (QA) Inspector observed ZPMC perform welder qualification test at the ZPMC test center. Caltrans QA observed Moody International(s) certified welding inspector, Mr. Zhou Da Qing and three associates perform the supervision and monitoring of the testing, per posted welding procedure criteria; amperages, voltages, travel speeds, preheat and interpass temperatures. Also present to witness the testing was ZPMC QA Inspectors, Mr. Lu Jian Hua, Mr. Jun Xu and American Bridge/Fluor (ABF) Quality Control (QC) subcontractor, Inspectech inspectors, Mr. Dustin Bruagardt and Mr. Danny McDonald. Caltrans QA observed welders performing shield metal arc welding (SMAW 3G), flux core arc welding (FCAW 3G) and submerged arc welding (SAW 1G) welder qualification testing in accordance with the posted welding procedures.

Caltrans QA observed welders wire brushing between weld passes, chipping slag prior to the resuming a weld pass after the changing out of an electrode and welding weld passes with a continuous arc welding method.

Caltrans QA Inspector observed that the weld test plates for the two SAW welder operator qualification testing were not in accordance with AWS D1.5 2002, Figure 5.24 minimum (400mm) test plate length. Caltrans QA informed ZPMC QA Inspector, Mr. Lu Jian Hua of the discrepancy. Mr. Lu confirmed that the test plates were undersize (25mm). Mr. Lu stopped the welding and informed Moody International to reissue new test plates with the correct length.

Caltrans QA Inspector observed welder Mr. Song Xun Tian (test plate #070503046) welding had been stopped during the welding of the cover pass. Moody International Inspector, Mr. Zhou stated that QC had tripped over the welding lead while verifying welding parameters, causing a portion of the weld to be visually unacceptable. Mr.

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Zhou stated that he would reissue the welder a new test plate and have the welder to start over.

The identified FCAW, SMAW and SAW welder/operator qualification test plates as follows:

FCAW: #070503031, 070503032, 070503033, 070503034, 070503035, 070503036, 070503037, 070503038, 070503039, 070503040, 070503041, 070503042, 070503043, 070503044, 070503045, 070503046, 070503047, 070503048 070503049 and 070503050.

SMAW: #070503119, 070503120, 070503121, 070503122, 070503123, 070503124, 070503125 and 070503126.

SAW: #070503153 and 070503154.

Moody International Inspector, Mr. Zhou reported the welder qualification test plate quantities and visually acceptance/rejection evaluation as follows:

Twenty (20) FCAW welders were tested and eleven (11) accepted; eight (8) SMAW welders were tested and two (2) accepted; two (2) SAW welder operator(s) were tested and accepted.



Summary of Conversations:

As identified within the contents of this report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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Inspected By:	Hasler, Mike	Quality Assurance Inspector
Reviewed By:	McClary, David	QA Reviewer
